

Patent Abstracts of Japan

PUBLICATION NUMBER : 01153131
PUBLICATION DATE : 15-06-89

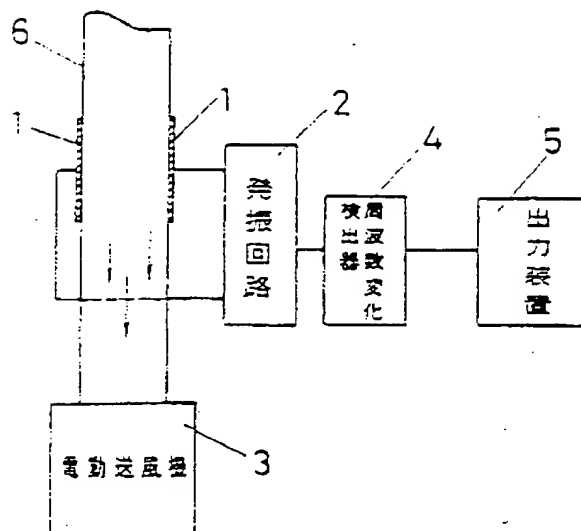
APPLICATION DATE : 11-12-87
APPLICATION NUMBER : 62314987

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INT.CL. : A47L 9/28 G01N 27/22

TITLE : DUST DETECTING DEVICE FOR
VACUUM CLEANER



ABSTRACT : **PURPOSE:** To provide a dust detecting device wherein the decrease of a sensitivity due to the adhesion of dust and a malfunction due to noises from the outside are less by providing a frequency change detector which detects the frequency of an oscillation circuit, and an output device which controls an electric blower and other apparatus by the signal from the frequency change detector.

CONSTITUTION: An oscillation circuit 2 oscillates by a fixed frequency (f_0) by making a condenser which is constituted of confronted electrodes 1 and uses air as a dielectric, as the resonant element. When dust in air which is drawn by an electric blower 3 passes between the electrodes in an air suction passage 6, the dust generates a change of the dielectric constant, i.e., a change of the electrostatic capacity. For this reason, the frequency of the oscillation circuit 2 changes further, and at the output terminal of a frequency change detector 4, a signal in response to the frequency variation generates. For this reason, by an output device 5, the change can be displayed on a display device, or the revolution number of a motor of the electric blower 3 can be controlled by using the signal. Therefore, a change of the characteristics due to the adhesion of dust is less, and a stable operation which is strong against noises from the outside, can be performed.

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